



Alternative Energy is the second edition of the Railroad Commission of Texas' curriculum supplement for secondary-school science students. Like its predecessor, *Alternative Transportation Fuels* (1996), the supplement begins by introducing scientific principles of energy and fuels, then proceeds to investigate specific topics: the nature and extent of energy resources, the economics and environmental effects of energy use, alternative energy, energy technology, health and safety. The second edition also includes a new unit on global climate change.

More than half of the lessons in *Alternative Energy* include hands-on scientific investigations. This is the preferred approach in Texas schools. Texas law requires high-school science students to spend at least 40 percent of their instructional time conducting field and laboratory investigations, and the Texas Education Agency recommends this approach for middle-school science courses.

In addition, *Alternative Energy* includes five integrated lessons in art/language arts, health, mathematics and social studies as well as a fast-paced introductory video. These materials are provided for schools that take a school-wide approach to the teaching of science or that organize units of study thematically.

The lesson plans for each investigation are keyed to Texas' state achievement tests, in particular the Texas Assessment of Academic Skills test in science. The TAAS objectives focus on those skills necessary for each student to approach this test with confidence. To prepare students for the exit-level TAAS exam in the eleventh grade, the lessons also include Texas Essential Knowledge and Skills (TEKS) objectives for high-school integrated physics and chemistry.

Selected electronic resources are listed at the end of each section to help meet community expectations set out in the Texas Education Agency's Long-Range Plan for Technology. Teachers may use these resources to meet advanced students' learning needs, clarify and extend concepts, establish partnerships with local businesses and community organizations, and help integrate TEKS into computer-based classroom activities.

The energy choices our citizens make today will affect the environment, economy, and security of the United States, especially those of energy-producing states such as Texas. Yet even in Texas, many citizens remain ignorant about energy issues.



INTRODUCTION

We hope you and your students find this supplement useful in filling in some of those knowledge gaps. Please let us hear from you at any time with suggestions on how to improve the materials, requests for additional information and assistance, and news about you and your students' experiences with the supplement.

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